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C Jd

polyacrylic acid salt, carboxymethyl cellulose, carboxymethyl starch, alginic acid, xanthan gum and polymethacrylic acid salt and a resin having a cationic group which is at least one resin selected from the group consisting of cationized cellulose, cationized starch, cationized cyamoposis gum, cationized dextrin and poly(dimethylmethylenepiperidinium chloride).

6. (Once Amended) The wet-responsive fiber as claimed in claim 5, wherein said base resin which is at least one resin selected from the group consisting of viscose rayon, polynosic rayon, cupra and saponified acetate is contained in an amount of 20 to 95 % by weight, said resin having the anionic group which is at least one resin selected from the group consisting of polyacrylic acid salt, carboxymethyl cellulose, carboxymethyl starch, alginic acid, xanthan gum and polymethacrylic acid salt is contained in an amount of 1 to 79 % by weight, and said resin having the cationic group which is at least one resin selected from the group consisting of cationized cellulose, cationized starch, cationized cyamoposis gum, cationized dextrin and poly(dimethylmethylenepiperidinium chloride) is contained in an amount of 1 to 79 % by weight.

REMARKS

The title has been changed to more accurately reflect the scope of the claims pursuant to the restriction requirement. Claims 1-33 are pending in the application. Following the August 22, 2002 revision of the restriction requirement, claims 10-23 and 29-33 are withdrawn from consideration. Claims 3, 4, 7-9 and 24-28 have been cancelled. Hence, claims 1, 2, 5 and 6 remain for prosecution purposes. Reexamination and allowance of claims 1, 2, 5 and 6 are respectfully requested.

The limitations of claims 3 and 4 have been added to claim 1, and the limitations of claims 24 and 25 have been added to claim 2. In addition, the limitations of claims 7, 8 and 9 have been added to claim 5, and the limitations of claims 26, 27 and 28 have been added to claim 6. Therefore, no new matter has been added to the claims.

The Examiner has revised the grouping of claims in requiring restriction to one of the following inventions:

Group I, covering claims 1-9 and 24-28, drawn to wet responsive fiber;

Group II, covering claims 10-11, drawn to a process for making wet responsive fiber; and

Group III, covering claims 12-23 and 29-33 drawn to a non-woven fabric.

Applicants confirm the election of the claims of Group I for prosecution.

The Examiner has rejected claims 1-5, 8, 9, 24 and 25 under 35 U.S.C. § 102(b) for anticipation by PCT document WO 96/17681 to Palumbo (hereinafter “Palumbo”). Palumbo teaches a superabsorbent material comprising a combination of an anionic superabsorbent in which from 20 to 100% of the functional groups are in free acid form, and a cationic superabsorbent in which from 20 to 100% of the functional groups are in basic form, the cationic superabsorbent being based on a polysaccharide or a polymer of units of a monomer of a specific formula.

However, Palumbo does not teach or suggest a wet-responsive fiber comprising the specific combination of a resin having an anionic group and a resin having a cationic group as well as the specific combination of a base resin, a resin having an anionic group and a resin having a cationic group of the present invention. Claims 1 and 5, as amended, recite these specific combinations. For these reasons, claims 1, 2 and 5 are not anticipated by Palumbo.

The Examiner has rejected claims 1-5, 8, 9, 24 and 25 under 35 U.S.C. § 102(a) for anticipation by PCT patent document WO 98/37149 to Goldman (hereinafter “Goldman”). Goldman teaches a composition comprising at least one cationic ion-exchange hydrogel-forming polymer and at least one anionic ion-exchange hydrogel-forming polymer, wherein the composition exhibits improved absorbency characteristics relative to comparable mixtures of the hydrogel-forming polymers in their neutralized state.

However, Goldman does not teach or suggest a wet-responsive fiber comprising the specific combination of a resin having an anionic group and a resin having a cationic group as well as the specific combination of a base resin, a resin having an anionic group and a resin having a cationic group of the present invention. Claims 1 and 5, as amended, recite these specific combinations. For these reasons, the rejection of claims 1, 2 and 5 for anticipation by Goldman has been overcome.

The Examiner has rejected claims 6, 7 and 26-28 under 35 U.S.C. § 103(a) as obvious over Palumbo or Goldman and further in view of U.S. Patent No. 3,889,678 to Chatterjee et al. (hereinafter "Chatterjee"). The Examiner asserts that although Palumbo and Goldman fail to expressly disclose the claimed base resin material used in the composition, Chatterjee teaches a cellulose graft polymer containing non-ionic and ionic polymer moieties as absorbent media in absorbent dressings. Chatterjee discloses that a backbone of natural or regenerated cellulose in fibrous form which has side chains of polymer moieties grafted thereto provides a fibrous material useful for a variety of water or aqueous fluid-adsorbent products and the polymer side chains are made up ionic and non-ionic polymer moieties in an amount to from about 10% to about 90% of the cellulose graft copolymer, and non-ionic polymer moieties comprise from about 0.5% to about 60% of the cellulose graft copolymer.

However, Chatterjee fails to disclose or suggest a wet-responsive fiber comprising the specific combination of a resin having an anionic group and a resin having a cationic group as well as the specific combination of a base resin, a resin having an anionic group and a resin having a cationic group of the present invention. This teaching or suggestion is also missing from the other references cited. Specifically, the use of a combination of ionic and nonionic polymer moieties by Chatterjee does not provide any teaching or suggestion with respect to a combination involving an anionic group and a cationic group as required in claim 6.

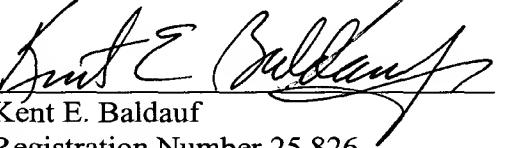
For these reasons, the rejection of claims 6 for obviousness over Palumbo or Goldman in view of Chatterjee has been overcome.

In view of the above amendments and remarks, it is believed that the claims are in condition for allowance. Reconsideration of the rejections is requested. Allowance of claims 1, 2, 5 and 6 is respectfully requested.

Respectfully submitted,

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MARKED-UP VERSION OF THE TITLE

Wet-Responsive Fibers [, Process for Producing the Same,
Nonwoven Fabrics and Uses Thereof]

MARKED-UP VERSION OF THE CLAIMS

1. (Once Amended) A wet-responsive fiber having a monofilament formed from a resin composition comprising a resin having an anionic group which is at least one resin selected from the group consisting of polyacrylic acid salt, carboxymethyl cellulose, carboxymethyl starch, alginic acid, xanthan gum and polymethacrylic acid salt and a resin having a cationic group which is at least one resin selected from the group consisting of cationized cellulose, cationized starch, cationized cyamoposis gum, cationized dextrin and poly(dimethylmethylenepiperidinium chloride).

2. (Once Amended) The wet-responsive fiber as claimed in claim 1, wherein said resin having the anionic group which is at least one resin selected from the group consisting of polyacrylic acid salt, carboxymethyl cellulose, carboxymethyl starch, alginic acid, xanthan gum and polymethacrylic acid salt is contained in an amount of 1 to 80 % by weight and said resin having the cationic group which is at least one resin selected from the group consisting of cationized cellulose, cationized starch, cationized cyamoposis gum, cationized dextrin and poly(dimethylmethylenepiperidinium chloride) is contained in an amount of 1 to 80 % by weight.

5. (Once Amended) A wet-responsive fiber having a monofilament formed from a resin composition comprising a nonionic resin which is at least one resin selected from the group consisting of viscose rayon, polynosic rayon, cupra and saponified acetate as a base, a resin having an anionic group which is at least one resin selected from the group consisting of polyacrylic acid salt, carboxymethyl cellulose, carboxymethyl starch, alginic acid, xanthan gum and polymethacrylic acid salt and a resin having a cationic group which is at least one resin

selected from the group consisting of cationized cellulose, cationized starch, cationized cyamoposis gum, cationized dextrin and poly(dimethylmethylenepiperidinium chloride).

6. (Once Amended) The wet-responsive fiber as claimed in claim 5, wherein said base resin which is at least one resin selected from the group consisting of viscose rayon, polynosic rayon, cupra and saponified acetate is contained in an amount of 20 to 95 % by weight, said resin having the anionic group which is at least one resin selected from the group consisting of polyacrylic acid salt, carboxymethyl cellulose, carboxymethyl starch, alginic acid, xanthan gum and polymethacrylic acid salt is contained in an amount of 1 to 79 % by weight, and said resin having the cationic group which is at least one resin selected from the group consisting of cationized cellulose, cationized starch, cationized cyamoposis gum, cationized dextrin and poly(dimethylmethylenepiperidinium chloride) is contained in an amount of 1 to 79 % by weight.

MARKED-UP VERSION OF THE TITLE

Wet-Responsive Fibers [, Process for Producing the Same,
Nonwoven Fabrics and Uses Thereof]

MARKED-UP VERSION OF THE CLAIMS

1. (Once Amended) A wet-responsive fiber having a monofilament formed from a resin composition comprising a resin having an anionic group which is at least one resin selected from the group consisting of polyacrylic acid salt, carboxymethyl cellulose, carboxymethyl starch, alginic acid, xanthan gum and polymethacrylic acid salt and a resin having a cationic group which is at least one resin selected from the group consisting of cationized cellulose, cationized starch, cationized cyamoposis gum, cationized dextrin and poly(dimethylmethylenepiperidinium chloride).

2. (Once Amended) The wet-responsive fiber as claimed in claim 1, wherein said resin having the anionic group which is at least one resin selected from the group consisting of polyacrylic acid salt, carboxymethyl cellulose, carboxymethyl starch, alginic acid, xanthan gum and polymethacrylic acid salt is contained in an amount of 1 to 80 % by weight and said resin having the cationic group which is at least one resin selected from the group consisting of cationized cellulose, cationized starch, cationized cyamoposis gum, cationized dextrin and poly(dimethylmethylenepiperidinium chloride) is contained in an amount of 1 to 80 % by weight.

5. (Once Amended) A wet-responsive fiber having a monofilament formed from a resin composition comprising a nonionic resin which is at least one resin selected from the group consisting of viscose rayon, polynosic rayon, cupra and saponified acetate as a base, a resin having an anionic group which is at least one resin selected from the group consisting of polyacrylic acid salt, carboxymethyl cellulose, carboxymethyl starch, alginic acid, xanthan gum and polymethacrylic acid salt and a resin having a cationic group which is at least one resin

selected from the group consisting of cationized cellulose, cationized starch, cationized cyamoposis gum, cationized dextrin and poly(dimethylmethylenepiperidinium chloride).

6. (Once Amended) The wet-responsive fiber as claimed in claim 5, wherein said base resin which is at least one resin selected from the group consisting of viscose rayon, polynosic rayon, cupra and saponified acetate is contained in an amount of 20 to 95 % by weight, said resin having the anionic group which is at least one resin selected from the group consisting of polyacrylic acid salt, carboxymethyl cellulose, carboxymethyl starch, alginic acid, xanthan gum and polymethacrylic acid salt is contained in an amount of 1 to 79 % by weight, and said resin having the cationic group which is at least one resin selected from the group consisting of cationized cellulose, cationized starch, cationized cyamoposis gum, cationized dextrin and poly(dimethylmethylenepiperidinium chloride) is contained in an amount of 1 to 79 % by weight.